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Dunmow Rural District.



REPORT

of the

Medical Officer of Health

W. J. MOFFAT

M.B., CH.B., D.P.H.

FOR THE YEAR

1947.

BRAINTREE :
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Dunmow Rural District

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PUBLIC HEALTH OFFICES,
TOWN HALL,
BRAINTREE.

June, 1948.

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I have the honour to present to you my Annual Report for the year 1947 on the health and sanitary conditions of the Dunmow Rural District.

Although no figures are available as to the rate of non-notifiable sickness in the District, apart from the Registrar General's annual returns of the causes of death, it could fairly be said that the health of the Rural District has been good. The birth rate remained at the comparatively high level of the previous year and the death rate remained low. The incidence of infectious disease was also low, although there falls to be recorded ten confirmed cases of Poliomyelitis. It would appear that the morbidity from all forms of Tuberculosis is, if not actually decreasing, at least showing no increase on the rate of previous years.

The main problem facing the Rural District Council at the present time is that of housing. An indication of the demand within the District for new housing is the fact that there were 630 applicants for Council Houses at 31st December, 1947. The rate of progress in the Council's programme for the erection of new houses did not come up to earlier expectations and for this fact various causes have been responsible. As a consequence far too many old properties, which have already been condemned as unfit for human habitation, have had to remain occupied.

While it could not be said that there was any improvement in the housing situation during the year, there were obvious signs that some considerable improvement in this respect could be looked for early in 1948.

The Council have pursued their policy of providing an adequate piped water supply to all parts of their District where such a service is practicable. To that end, a Local Inquiry was held by an Inspector of the Ministry of Health in October, 1947, into the Council's application for a loan to provide for the augmentation of their existing sources of supply and the laying of the necessary mains. Approval to the Council's proposals was obtained in principle, and authority to proceed with the major part of the scheme had been obtained before the end of the year. This work will include the extension of the existing mains and the sinking and proving of a new

borehole at Thaxted, near the site of the present works, in order to provide a supply to meet the future demand envisaged in these proposals.

During the year 1947 steady progress was made in the laying of extensions to the water mains in several parts of the District as part of the Council's post-war scheme.

The Council are also anxious to proceed with the sewerage of those several inhabited parts of the District which, even now, are not provided with any system of sewerage and sewage disposal. There is an increasing public demand for the provision of such services. The Council have taken steps to acquire the land necessary for the implementation of the comprehensive scheme embodied in their Consultant Engineer's Report of 1945. A local inquiry into these proposals is awaited.

I am very glad to avail myself of this opportunity of recording my thanks for the help and support I have received from the members of the Council and of the ever-willing co-operation of the Council's Officers during the year 1947.

I am, Mr. Chairman, Ladies and Gentlemen,

Your obedient Servant,

W. J. MOFFAT.

General Statistics

Area (in Acres)	72,511
Estimate of Resident Population in mid-1947	17,980
Number of Inhabited Houses according to Rate Books ...	5,560
Rateable Value	£70,206
Sum represented by a Penny Rate	£292 : 19 : 6

SOCIAL CONDITIONS.—There has again been no change of note. The District remains predominantly agricultural, and the few factories in the District are mainly ancillary to agriculture. There was no real unemployment during the year.

Vital Statistics

In Table I on page 5 will be found the Vital Statistics for the years 1938 to 1947 inclusive in regard to estimated mid-year populations and local and national Birth and Death Rates. As no Area Comparability Factor is available for recent years, strict comparison between the local and national Death Rates is not possible, but it appears that the age distribution of the population of the Rural District is again approximating to that of the pre-war years, when there was a preponderance of the older age groups compared with England and Wales as a whole. In the pre-war years the Standardised Death Rate for the District was consistently below the national rate.

The Causes of Death, as supplied by the Registrar General, are set out in Table II on page 6. Again diseases of the heart and of the circulatory system took the greatest toll and that in the older age groups.

The nett deaths of "Residents," whether occurring within or without the Rural District in 1947, were distributed in age groups as shown below.

All Ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 55	55 and under 65	65 and under 75	75 and upwards
237	7	—	2	2	2	2	9	11	29	62	111

TABLE I.

VITAL STATISTICS FOR 1947 AND PREVIOUS YEARS.

Year	Population estimated mid-year	BIRTHS			Total Number Registered in District	DEATHS.								
		NETT				NETT								
		Number	Rate	Rate England & Wales		TRANSFERABLE		Under 1 year of age			At all ages.			
						Of Non-registered Residents in District	Of Residents not registered in District	Number	Rate per 1000 nett Births	Rate England & Wales	Number	Rate	Rate England & Wales	Natural Increase
1938	16,190	247	15.2	15.1	141	11	79	12	48	53	209	12.9	11.6	38
1939	(a) 16,220 (b) 17,150	228	14.0	14.8	114	8	77	10	43.9	x 50	183	10.7	12.1	45
1940	18,240	231	12.7	14.1	192	14	82	4	16.8	x 57	260	14.3	14.4	— 23
1941	18,970	247	13.0	13.9	162	8	44	15	53	x 60	246	12.9	13.5	1
1942	18,210	270	14.8	15.6	137	5	101	15	55.5	x 51	231	12.7	12.3	19
1943	17,920	310	17.3	16.2	122	7	96	12	38.7	x 49	211	11.8	13.0	99
1944	18,060	302	16.7	17.7	180	26	79	19	62.9	x 45	233	12.9	12.7	69
1945	17,760	266	14.9	15.9	146	16	95	14	60	x 46	225	12.7	12.6	41
1946	17,810	342	19.2	19.1	146	5	84	12	35.1	x 43	225	12.1	11.5	117
1947	17,980	345	19.2	20.5	154	7	90	7	20.3	x 41	237	13.2	12.0	108

(a) For calculation of Birth Rates.

(b) For calculation of Death Rates and Notifiable Disease.

o Provisional.

x Rate per 1000 "Related" Births.

TABLE II.
CAUSES OF DEATH.

The Table below was compiled from figures supplied by the Registrar-General and the classification is given under the new abridged list of causes of death as used in England and Wales contained in the Manual in the International List of Causes of Death.

Cause of Death.				Males.	Females
Typhoid and paratyphoid fevers	...	...	...	—	—
Cerebro-spinal fever	...	...	...	—	—
Scarlet fever	...	...	...	—	—
Whooping Cough	...	...	...	—	1
Diphtheria	...	...	...	—	—
Tuberculosis of respiratory system	...	...	...	3	5
Other forms of tuberculosis	...	...	...	—	—
Syphilitic disease	...	...	...	1	—
Influenza	...	...	...	—	—
Measles	...	...	...	—	—
Acute poliomyelitis and polio-encephalitis	...	...	...	2	—
Acute infectious encephalitis	...	...	...	—	—
Cancer of buccal cavity and oesophagus (M)	...	...	...	...	...
uterus (F)	...	...	...	3	—
Cancer of stomach and duodenum	...	...	...	4	6
Cancer of breast	...	...	...	—	5
Cancer of all other sites	...	...	...	16	7
Diabetes	...	...	...	—	—
Intra-cranial vascular lesions	...	...	...	13	26
Heart disease	...	...	...	30	25
Other diseases of circulatory system	...	...	...	10	4
Bronchitis	...	...	...	11	3
Pneumonia	...	...	...	4	3
Other respiratory diseases	...	...	...	1	—
Ulcer of stomach and duodenum	...	...	...	2	1
Diarrhoea under 2 years	...	...	...	—	—
Appendicitis	...	...	...	—	—
Other digestive diseases	...	...	...	1	3
Nephritis	...	...	...	5	3
Puerperal and post-abortive sepsis	...	...	...	—	—
Other maternal causes	...	...	...	—	1
Premature birth	...	...	...	1	1
Congenital malformation, birth injury,	...	...	...	...	...
infantile disease	...	...	...	3	2
Suicide	...	...	...	—	—
Road traffic accidents	...	...	...	4	1
Other violent causes	...	...	...	2	4
All other causes	...	...	...	10	10
All causes	...	...	...	126	111

Details of Births, Still Births and Deaths of Infants under one year of age were as follows for the year ending 31st December, 1947.

Live Births.	Male.	Female.	
Total ...	177	.. 168	Birth Rate per 1000 of the
Legitimate ...	168	... 156	estimated resident popula-
Illegitimate ...	9	... 10	tion ... 19.2

Still Births.	Male.	Female.	
Total ...	4	... 2	Rate per 1000 total (Live
Legitimate ...	4	... 2	and Still Births) ... 17.1
Illegitimate ...	—	... —	

Deaths of Infants under 1 year of age.

	Male.	Female.
Total ...	4	... 3
Legitimate ...	4	... 2
Illegitimate ...	—	... 1

Death Rate of Infants under 1 year of age.

All Infants per 1000 Live Births	... ..	20.3
Legitimate Infants per 1000 legitimate Live Births	...	18.4
Illegitimate Infants per 1000 illegitimate Live Births	...	52.6

General Provision of Health Services.

Public Health Officers.

For list see page 1.

The Medical Officer of Health is also Medical Officer of Health for the Urban Districts of Braintree and Witham, and the Rural District of Braintree, and Assistant Medical Officer to Essex County Council.

Office accommodation is provided for him, by arrangements made by the Braintree and Dunmow (United) Sanitary Districts Committee at the Braintree and Bocking Urban District Council Offices in the Town Hall, Braintree.

The Chief Sanitary Inspector is also Surveyor to the Council.

Laboratory Facilities.

The bacteriological laboratories serving the Rural District are those at St. John's Hospital, Chelmsford, for the central and eastern part, and at Haymeads Hospital, Bishop's Stortford, for the western portion of the area. The service is, by arrangement with the Ministry of Health, under the control of the County Medical Officer.

Under other arrangements made by the Essex County Council, the Counties Public Health Laboratories, 66, Victoria Street, London, S.W. 1, undertake the bacteriological and chemical analyses of water, the chemical analyses of sewage effluents and the bacteriological examination of milk and ice cream, and of other foods for pathogenic bacteria.

Milk supplies, under similar arrangements to the above, are examined at the Essex Institute of Agriculture, Writtle, near Chelmsford. This service does not include the biological examination of milk samples, which are sent to the laboratory of Dr. A. Leslie Sheather, at Wroxtton, Chorley Wood, Herts.

Ambulance Facilities

In view of the impending changes in administration under the National Health Service Act, 1947, the Council decided that their existing motor ambulance (an ex-army model) would suffice to the end of their term of responsibility for the service, although it is admittedly not too well suited to its present task. The Council's ambulance, which is garaged at the Council House, Great Dunmow, is available for the conveyance of all types of cases. In addition, an ambulance of the St. Johns Ambulance Brigade is stationed at Great Dunmow and can be employed for the transport of patients, other than those suffering from infectious diseases.

The scheme, under the auspices of the Essex County Council, for the co-ordination of the ambulance services in the County area continued to operate during 1947.

The ambulance service has proved generally to be adequate for the needs of the District, and no difficulty has been experienced in obtaining supplementary services from outside the District when such were required.

Nursing in the Home

This service continued to be undertaken very satisfactorily by the Essex County Nursing Association, the work of whose several District Nurses in the area covers the whole Rural District.

Treatment Centres and Clinics

These are provided by the Essex County Council and include Child Welfare Centres in all the larger villages, Minor Ailment, Dental, Tuberculosis and Ante-Natal Clinics at Great Dunmow. Other Clinics, *e.g.* Venereal Disease, Orthopædic, Mental Treatment and Eye Clinics are available at Braintree or Chelmsford.

Hospitals

Apart from the small Cottage Hospital at Hatfield Broad Oak, which takes the majority of its cases from outside the District, all cases which require Hospital accommodation have to be sent to institutions situated outside the Rural District Council's boundary.

Cases of infectious disease from the District were admitted mainly to Chelmsford Infectious Diseases Hospital. Occasional cases were admitted to the Infectious Diseases Hospital at Colchester, and Saffron Walden Isolation Hospital was also sometimes available.

For cases of general sickness and accident which required hospital treatment, beds were available in the general hospitals at Chelmsford, Bishop's Stortford, Saffron Walden and Braintree. Usually, patients were admitted to the particular hospital nearest to their homes. Patients from this District were also admitted to Haymeads Hospital, Bishop's Stortford, and to Essex County Council Hospital, Black Notley.

Maternity cases, when confinement in hospital is indicated, are usually admitted to St. John's Hospital, Chelmsford. Occasionally, such cases are accommodated in the William Julien Courtauld Hospital, Braintree, or Bishop's Stortford Hospital.

St. Michael's Hospital, Braintree, is the Social Welfare Institution of the County Council which admits the majority of the cases of chronic sickness and senility from the Dunmow Rural District. Similar accommodation is also provided by the County Council at Chelmsford and Saffron Walden and, by arrangement, at Bishop's Stortford. Accommodation for such cases is becoming increasingly difficult to find, as the proportion of older persons in the population increases without a corresponding increase in the facilities for them to be cared for at home.

The Council's Isolation Hospital at Great Dunmow remained empty during the year. The buildings were in a somewhat dilapidated state, apart from falling below modern standards, and in view of probable future developments, the Council sought the permission of the Ministry of Health to dispose of it. This has now been granted and it is anticipated that it will not be long before it ceases to exist as a Hospital, even in name.

The steam disinfecter at this hospital is still in use.

Legislation in Force

No new bye-laws were adopted or brought into operation during the year. The bye-laws relating to New Buildings and adopted by the Council under Section 61, Part II, of the Public Health Act, 1936, which would have elapsed at the expiry of ten years on 29th July, 1949, have been automatically extended by the Minister of Health under Circular 181/47 to 31st December, 1949.

Sanitary Circumstances of the Area

WATER

An outline of the existing provisions of main water supplies throughout the District was given in my Annual Report for 1946. In the year under review, the only addition was the laying of some additional lengths of main, particulars of which are set out later in this section of the report.

The quality of the water supplied through the mains was always satisfactory during the year. There was also, with the minor exception of a slight breakdown of short duration in the Herts. and Essex Water Company's area, always a sufficient quantity of water available for consumers on the main, but to maintain this supply the average number of hours of pumping each day at the Council's Works had to be increased and there was, therefore, a consequent proportionate decrease in the reserve supply of water available to meet exceptional demands.

With regard to those portions of the District which have not yet got main water supplies available, there were several instances of failure of shallow wells. In these cases, supplies were carted by the Council, who purchased water tank trailers for the purpose. In some cases also, these shallow wells were reported upon by the laboratory as being unsatisfactory in quality on bacteriological examination.

Periodical bacteriological examinations are made of the water from the Council's supply, both of raw water and of the water going into supply after treatment. In the case of Thaxted Waterworks, twelve such examinations were made in 1947, and in the case of Dunmow Waterworks, seventeen. All of these examinations showed that both the raw and the treated water were pure and wholesome in character.

The Herts and Essex Water Company also submit similar samples from their supply for examination and furnish the Council with a copy of the results obtained. Thirteen examinations in that part of the area of the Company's supply, which includes this District, were made in 1947. In every instance, the samples showed the water to be pure and wholesome.

Samples of water from the Council's two sources of supply, the deep wells at Thaxted and Great Dunmow, are also submitted for chemical analysis at least twice yearly.

These samples have also been reported upon as being of satisfactory quality. It is to be noted that, in the case of the water from the Thaxted supply, the total hardness has increased from 38 parts per 100,000 in 1938 to 43 parts in 1947. The water from the Dunmow well has, throughout this period, had a total hardness of 32 to 33 parts per 100,000. It is the Council's intention to instal water-softening plant for each of these supplies at the respective Works as soon as it is possible to do so.

Copies of the complete examination, both chemical and bacteriological, of the raw water from the Thaxted borehole and of that from the borehole at Great Dunmow will be found on pages 15 and 16. A copy of the report on a bacteriological examination of the Herts and Essex Water Company's supply is given on page 17.

None of these water supplies are liable to have any plumbo-solvent action.

No action was required in respect of any form of contamination during the year.

The table on page 14 shows in respect of each of the twenty-five parishes in the Rural District the position at the end of the year in regard to the number of houses, estimated population and the provision of main water supplies, either by pipes into the houses or by stand pipes.

NEW EXTENSIONS AND CONNECTIONS TO WATER MAINS.

The following new extensions were completed during 1947 in the Council's area of supply :—

Broxted ...	3,400 yards of 4-inch main at Brown's End Road.
Stebbing ...	250 yards of 3-inch main at Mill Lane.
Takeley ...	200 yards of 3-inch main at Broadfield Road.

There were no extensions to the mains of the Herts and Essex Water Company in the District.

Of new connections, there were 85 in the Council's area for dwelling houses and 14 metered supplies for farm and trade purposes. In the case of the Herts and Essex Water Company 30 new connections were made to their main in the parishes of Hatfield Broad Oak, Great and Little Hallingbury.

PROPOSED NEW WORKS OF WATER SUPPLY.

As has already been recorded, the Council, in the past few years had appreciated the fact that their existing scheme of water supply, although only dating from 1938, was fast reaching its capacity and that there were still considerable, though not densely populated, parts of the District without a piped water supply. The Council's policy has been to provide an adequate supply of wholesome water to all parts of their District, and accordingly in 1944, they had asked for a report from their Consultant Engineers as to the means to be adopted to augment their existing sources. This report was somewhat amended in 1947, in consultation with the Council's Officers, as by then, it appeared that the provisions made for possible future demands were on the meagre side.

The final scheme submitted to the Ministry of Health's Engineering Inspector at a Public Inquiry held at Dunmow on 16th October, 1947, aims to provide a population of 15,000 with 30 gallons per head per day, while allowing 107,000 gallons per day for agricultural purposes, and 75,000 gallons per day for trade purposes. The figure of 15,000 for the estimated future population is a few hundreds more than the present number of inhabitants in the area covered by the scheme (*i.e.*, all parishes in the Rural District except the major part of Great and Little Hallingburys and Hatfield Broad Oak.) It is not considered likely that the population of this part will ever greatly exceed that proposed. The works proposed in the scheme include the sinking of a new borehole at Thaxted, the laying of considerable lengths of new mains in various parts of the District, and, as soon as practicable, the installation of water-softening plants.

In December, the Council were notified by the Minister of Health of his approval in principle, to the proposals to extend and augment their water supply undertaking and that the Council's application for

loan sanction in respect of the acquisition of the site proposed at Thaxted, and the sinking, testing and equipment of the borehole there, the replacement and improvement of the pump at Dunmow, and the mains extension as proposed, but divided into instalments, the most urgent to be done first.

It is hoped that work will commence during 1948 on the sinking of the new borehole at Thaxted, and on the laying of the new water mains at Broxted, Great Dunmow, High Easter and Felstead.

WATER CONSUMPTION IN THE DISTRICT.

This District, in common with others, has, of recent years experienced a steady rise in the demands made upon its water supply system for domestic and other purposes. Total daily consumption from the Council's mains, which, in 1938, was 137,200 gallons per day, had risen to 379,000 gallons in mid-1947.

It was found that consumption was not uniform throughout the District, and this applied particularly to domestic consumption. An extensive check on the rate of domestic consumption on the Council's system was made in 1944, when the average rate for the whole of the area was 19.1 gallons per day, the lowest rate being less than 10 gallons per head per day in the Rodings, Canfield and High Easter localities and the highest, of 33 gallons per head per day in the Thaxted and surrounding parishes. These figures include waste, which, in the opinion of the Consultant Engineer, has been increasing. In 1947, the rate of consumption for domestic purposes had risen to 27.6 gallons per head per day in the summer.

At mid-1947, there were 3,178 out of 4,500 houses connected to the mains, but only some 36% of the houses thus connected had water taps, W.C's. and bath, 22% had a tap and a W.C., and 36% had one tap only. The remainder had a standpipe supply. In the Rodings, Canfield and High Easter area only 17% of houses had tap, W.C. and bath, while no less than 68% had one tap only, which fact would account for the discrepancy in the consumption rates.

When the Council are able to implement their decision to provide a softened water supply it is considered certain that domestic consumption will rise still further, as it is evident that much domestic washing is done with stored rain water when that is available.

Having given consideration to the above trends of demand, and to the requirements of trade and agriculture in the District, the Council decided to proceed with their scheme on the basis of giving a daily supply of 30 gallons per head to all the houses in their area and to have plant capable of meeting a moderate increase in the demand during periods of exceptional draw off. This, it is felt, will ensure that there will be available for a considerable period to come, an adequate, if not lavish supply of piped main water for all consumers on their distribution mains.

Main Water Supplies

Population in each Parish on Main Supply :—

Parish	No. of Houses	Estd. Pop'n.	Houses on Main Supply	Estd. Pop'n on Main Supply	Houses Supplied by Stand-pipe	Estd. Pop'n Supplied by Stand-pipe
Aythorpe Roding ...	76	242	27	86	1	3
Little Bardfield ...	117	371	30	95	1	3
Barnston ...	85	272	56	179	2	6
Broxted ...	157	502	120	384	1	4
Great Canfield ..	137	438	88	282	6	19
Little Canfield ...	73	234	59	189	3	10
Chickney ...	10	32	3	10	—	—
Great Dunmow ...	1003	3259	883	2869	10	32
Little Dunmow ...	112	359	61	195	9	29
Great Easton ...	204	653	146	467	5	17
Little Easton ...	108	356	68	218	6	19
Felstead ...	505	1726	416	1331	9	29
Great Hallingbury ...	272	870	170	544	6	19
Little Hallingbury ...	201	643	186	595	5	16
Hatfield Broad Oak ...	620	1984	401	1283	7	22
High Easter ...	192	611	86	275	16	56
High Roding ...	125	400	103	320	4	14
Leaden Roding ...	66	210	52	166	2	7
Lindsell ...	84	269	53	170	7	22
Margaret Roding ...	84	270	41	131	4	14
Stebbing ...	312	1024	216	702	19	61
Takeley ...	305	976	245	765	6	20
Thaxted ...	573	1852	534	1733	2	7
Tilty ...	25	80	3	10	—	—
White Roding ...	108	372	58	185	—	—

Sample from Great Dunmow Public Supply

Date of Sample, 8/7/47.

Chemical Results in Parts per Million.

Appearance—Very faint opalescence with very slight flocculent deposit of mineral debris consisting of iron oxide together with a slight growth of Gallionella.

Colour ...	Nil	Turbidity (Silica Scale) less than	5
Odour ...	Nil	Reaction pH Neutral...	7.2
Electric Conductivity			
at 20°C	690	Total Solids dried at 180°C	460
Chlorine in Chlorides	38	Alkalinity as Ca CO ₃	305
Hardness—Total	320	Free Carbon Dioxide	28
„ —Temporary	305	Nitrogen in Nitrates	0.0
„ —Permanent	15	Nitrogen in Nitrates	Absent
Metals—Iron	0.24	Free Ammonia	0.13
„ —Other Metals	Absent	Albuminoid Ammonia	0.000
Fluorine	1.0	Oxygen absorbed in 4 hours	
		at 27°C	0.00

Bacteriological Results.

Number of Colonies developing on Agar per ml. in

1 day at 37°C	2 days at 37°C	3 days at 20°C
0	0	—

Presumptive Coliform Reaction	Present in —	Absent from 100 ml.
Bact. Coli. ...	Present in —	Absent from 100 ml.

Report.—This sample has faint opalescence and slight deposit due to the presence of a trace of iron but it is not unduly turbid. It is free from other metals. The water is neutral in reaction, very hard in character but not excessively so and it contains no excess of salinity or mineral constituents in solution. It is of a high standard of organic and bacterial purity.

The water is considered pure and wholesome in character and suitable for public supply purposes, clarification and the removal of the trace of iron being advantageous.

Signed—G. J. LAWS.

Sample from Thaxted Public Supply

Date of Sample 25/8/47.

Chemical Results in Parts per Million.

Appearance—Slight opalescence with a very few particles of mineral debris.

Colour ...	Nil	Turbidity (Silica Scale) ...	5
Odour ...	Nil	Reaction pH Neutral ...	7.0
Electric Conductivity at 20°C ...	755	Total Solids dried at 180°C ...	505
Chlorine in Chlorides ...	35	Alkalinity as Ca CO ₃ ...	295
Hardness—Total ...	430	Free Carbonic Dioxide ...	42
„ —Temporary ...	295	Nitrogen in Nitrates ...	0.0
„ —Permanent ...	135	Nitrogen in Nitrates Less than ...	0.01
Metals—Iron ...	0.30	Free Ammonia ...	0.22
„ —Other Metals Absent		Albuminoid Ammonia ...	0.000
Fluorine ...	0.6	Oxygen absorbed in 4 hours at 27°C ...	0.15

Bacteriological Results..

Number of Colonies developing on Agar per ml. in			
1 day at 37°C	2 days at 37°C	3 days at 20°C	
11	12	—	
Presumptive Coliform Reaction	Present in	—	Absent from 100 ml.
Bact. Coli ...	Present in	—	Absent from 100 ml.

Report.—This sample shows slight opalescence and deposit due to the presence of a trace of iron, but it is not unduly turbid and other metals are absent. The water is neutral in reaction, extremely hard in character, but it contains no excess of salinity or mineral constituents in solution. It is of satisfactory organic quality and bacterial purity.

These results are consistent with a pure and wholesome water suitable for public supply purposes, apart from the disadvantage of the high degree of hardness.

Signed—G. J. LAW.

Sample from Herts. and Essex Waterworks Company

Date of Analysis, 3/2/47.

Bacteriological Examination only.

Number of Colonies per cubic centimetre or millilitre of water
growing upon Agar at 20°C in 3 days 2

Number of Colonies per cubic centimetre or millilitre of water
growing upon Agar in 37°C in 1 day 0
2 days 0

Presumptive Coliform Reaction *Present: 50 ml. Absent: 10 ml.

Smallest quantity of water containing the Bacillus
Coli Absent: 100 ml.

Smallest quantity of water giving the reaction of
the B. Welchii (Bacillus Enteriditis Sporogenes) Absent: 100 ml.

*False presumptive reaction due to sporing organisms.

Report.—This sample is reasonably clear and bright, having only a few particles of matter in suspension, and is of very satisfactory bacterial purity.

These results are consistent with a pure and wholesome water suitable for public supply purposes.

(Signed) GORDON MILES,
For the Counties Public Health Laboratories.

Drainage and Sewerage

Apart from the completion of the work of enlarging the Sewage Disposal Works at Hatfield Heath no developments took place during the year.

Steps were taken to acquire the sites necessary for the fulfilment of the Council's intention to provide sewerage and sewage disposal plant for the greater part of the built-up portions of the District. For years the provision of adequate sewage disposal facilities in the District has failed to keep in step with the progressive extension of the main water supply system. The time is overdue for an attempt to be made to catch up the leeway and to eliminate, among other undesirable features, the nuisances arising from the existing foul sewer ditches. It is an interesting speculation whether the present cost to the Council, and to private individuals, of maintaining even moderate standards of sanitation in large parts of the District would be much more in regard to time, labour and materials than would the provision of this long overdue amenity. There can be no doubt about the ever-growing public demand for such services throughout the District.

NEW CONNECTIONS TO SEWER.

A total of 18 new connections were made to the main sewers in 1947. Of these, 12 were at Great Dunmow, 3 at Hatfield Heath, 2 at Felstead, and 1 at Hatfield Broad Oak.

SEWAGE DISPOSAL WORKS.

Notes on the functioning of the various Sewage Disposal Works in the District during the year are given below :—

GREAT DUNMOW SEWAGE WORKS.

It was not to be expected that there would be an improvement in the quality of the effluent from these Works. Of six samples taken by the Essex County Council during the year, none proved satisfactory. No betterment can be anticipated on the existing site, and it can only be hoped that the replacement of these Works will not be too long delayed.

FELSTEAD SEWAGE WORKS.

These Works have shown considerable improvement in the quality of the effluent consequent on certain overhauls undertaken in 1947. They can now be considered to be functioning satisfactorily. It is to be noted that, when these Works were modernised in 1939, the average daily inflow was some 40,000 gallons, while now it is at the rate of nearly 120,000 gallons.

Although two out of the four samples examined during the year were unsatisfactory, these had been taken before the modifications to the plant had been made. The later samples showed that the effluent readily complied with the prescribed standards of the County Council.

THAXTED SEWAGE WORKS.

Once again these Works produced a uniformly unsatisfactory effluent, as was to be expected. In this case also the replacement of the inefficient plant cannot take place too soon.

Four samples were taken during the year and all were unsatisfactory.

HATFIELD HEATH SEWAGE WORKS.

The finishing of the work of enlarging the plant has produced a very efficient small Disposal Works here. When it is possible to determine with some accuracy the amount of sewage which will have to be dealt with from the former P.O.W. Camp, it will probably be found that these Works would be capable of dealing with the present flow to the nearby Hatfield Broad Oak Works, and that the latter could be eliminated with a consequent decrease in the running costs of the Council's Sewage Disposal Works as a whole.

Of three samples taken of the effluent from these Works during the year, all were satisfactory.

HATFIELD BROAD OAK SEWAGE WORKS.

These small Works again served their purpose efficiently.

DUNMOW AERODROME SEWAGE WORKS.

The flow to these Works is nowadays only a fraction of their designed capacity, and, as was to be expected, four samples out of four taken proved satisfactory.

In addition to the above Sewage Disposal Works the Council are at present installing small treatment plants to serve the newly-built Council Houses in the unsewered parts of the Rural District. Only one such plant was in operation by the end of the year and it had not settled down sufficiently by that time for any conclusions to be drawn as to its efficiency.

Rivers and Streams

Pollution of rivers and streams in several localities continues in the absence of sewerage systems which would result in abating this. An additional embryo source of pollution from Thaxted Gas Works was discovered during the year, but this has been dealt with successfully.

The existing sites of pollution are :

River Chelmer	...	Thaxted Sewage Disposal Works
		Duton Hall
		Great Easton
		Little Easton
		Great Dunmow Sewage Disposal Works
Stebbing Brook	...	Stebbing Village
Barnston Brook	...	Barnston
Pincey Brook	...	Takeley

Public Cleansing

A regular collection, combining refuse and salvage collection is made throughout the District, weekly in the lighting area and fortnightly in the non-lighting areas.

In order to obtain a suitable site for controlled tipping to replace the existing almost exhausted site at Great Dunmow Sewage Disposal Works, the Council, in November, requested the Minister of Health to make a Compulsory Purchase Order in respect of a site near Dunmow as negotiations had not proved successful. No decision had been given on this matter by the end of the year.

The Council have now placed an order for a modern Refuse Collecting Vehicle, which will be a great improvement on the existing unsatisfactory vehicles which have long outlived their useful life.

Apart from the regular emptying of cesspools serving Council House sites, the District Council do not undertake any cesspool emptying or night soil collection.

Sanitary Inspection of the Area

The Council's Sanitary Inspectors made 2,409 visits and inspections in the course of the year. Details of these are given below.

Housing and Public Health Acts	...	...	422
Complaints (other than dwelling houses)...	...	...	50
Slaughterhouses	..	...	186
Other Meat and Food Visits	...	...	59
Shops Acts ...	...	...	36
Milk and Dairies	...	...	236
Factories and Workshops	...	...	39
Tents, Vans and Sheds	...	...	51
Places of Amusements	...	...	1
Schools	...	...	7
Stables and Pigstyes	...	...	2
Offensive Accumulations	...	...	6
Infectious Disease Prevention	...	...	93
Water Supplies	...	...	160
Streams and Watercourses	...	...	19
Drainage	...	...	106
Cesspools, Septic Tanks, Pail Closets	...	...	24
Sewage Disposal	...	...	268
Refuse Disposal	...	...	17
Salvage	...	...	34
Rodent Control	...	...	115
Miscellaneous	...	...	328

Nuisances and Notices Served.

Nuisances detected	...	...	86
Informal Notices served	...	...	82
Notices outstanding, 1st January	...	...	3
Notices outstanding, 31st December	...	...	44
Statutory Notices served	..	...	7
Legal Proceedings	...	...	0

Shops

No formal action was taken under the provisions of the Shops Act, 1934. but in several instances minor improvements were effected after visits by the Inspectors.

Tents, Vans and Sheds

There are several caravan sites in the District. In the cases where only one movable dwelling is sited conditions as to water supply and sanitation are generally satisfactory, the provision of such suitable services having been made a condition by the Council when

granting the annual licence. For many years now there have been a few sites in the District, which accommodate numbers of moveable dwellings. In these, conditions have not always been satisfactory. The travelling caravan dweller is becoming an increasingly noticeable figure in the District, but rarely does he remain long enough in one location to require a licence for the site he occupies.

Vermin Infestation

During the year there were six properties found to be infested by bed bugs. The present routine method of eradication in such cases, namely, the use of a spray containing 5 per cent. D.D.T. in kerosene for buildings and furniture, together with steam disinfection of clothing and bedding proved effective in all instances.

The usual way in which infestations are brought to notice is by the visit of the Sanitary Inspectors prior to families moving into Council Houses.

Factories

In the table on page 23 are given details of the Factories in the District, and of the inspections made by the Council's Officers.

There are very few outworkers in the Rural District, and in no case was such work being carried out in unwholesome premises.

Schools

Gradually, the sanitary conditions in the Primary Schools in the District are being brought up to a more modern standard. All now have main water supplies available, but not in every case inside the school building. Where sewers are available, the schools are provided with W.C's, but elsewhere pail closets are in use. In some of the Voluntary Schools in particular the closet accommodation was in poor condition, but following representations by the Council, some necessary work was put in hand.

Rodent Control

During the year, 25 complaints of infestation of premises by rats and mice were received. Five of these cases were referred to and dealt with by the Agricultural Committee, with whom the Council work in close liaison on these matters. The remainder were dealt with directly by the Public Health Department of the Council.

Factories Act, 1937

1. INSPECTIONS for purposes of provisions as to health (including inspections made by Sanitary Inspectors).

Premises 1	Number on Register	Number of		
		Inspections	Written Notices	Occupiers Prosecuted
(i) Factories in which Sections 1, 2, 3, 4 and 6 are to be enforced by Local Authorities	13	13	—	—
(ii) Factories not included in (1) in which Section 7 is enforced by the Local Authority	26	26	—	—
(iii) Other premises in which Section 7 is enforced by the Local Authority (excluding out-workers' premises)	—	—	—	—
TOTAL ...	39	39	—	—

2. Cases in which DEFECTS were found.

Particulars	Number of cases in which defects were found				No. of cases in which prosecutions were instituted
	Found	Remedied	Referred		
			To H. M. Inspector	By H. M. Inspector	
Want of cleanliness (S.1) ...	—	—	—	—	—
Overcrowding (S 2) ...	—	—	—	—	—
Unreasonable temperature (S.3)	—	—	—	—	—
Inadequate ventilation (S.4)	—	—	—	—	—
Ineffective drainage of floors (S.6)	—	—	—	—	—
Sanitary convenience (S.7)	—	—	—	—	—
(a) insufficient	1	1	—	—	—
(b) unsuitable or defective	1	1	—	—	—
(c) not separate for sexes	1	1	—	—	—
Other offences (not including offences relating to out-work	—	—	—	—	—
TOTAL ...	3	3	—	—	—

Housing

The first of the Council's post-war houses were completed in 1947. There were 22 in all, situated as follows :—

Great Dunmow	...	6	Great Hallingbury	...	4
High Roding	...	4	Felstead	...	2
Thaxted (Monk Street)			...	6	

In addition, by conversion of the former Anglo-American Hostel at Great Dunmow, six temporary dwellings were made available and a further such dwelling became occupied at Takeley by the adaptation of a former R.A.F. hut.

There were in course of construction for the Council at 31st December, 1947, a further 112 houses, distributed throughout the Rural District as follows :—

Great Dunmow	...	34	Felstead	...	32
Little Canfield	...	8	Great Hallingbury	...	8
Broxted	...	8	Great Easton (Duton Hill)	16	
Leaden Roding	...	4	Margaret Roding	...	2

In the latter part of the year, the Council were offered 22 Airey houses by the Ministry of Health. These were accepted and construction was due to commence early in 1948.

During the year, 49 dwellings were completed by private enterprise, of these 35 were permanent and 14 temporary houses. The total building under this head since the war was 70 houses at 31st December, 1947 (56 permanent and 14 temporary).

At the end of the year, the Council had on requisition 83 dwellings in which were housed homeless persons who had come to the District chiefly during the war and who had been unable to find adequate accommodation. The majority of those 83 houses had been condemned under the Housings Acts, but demolition had been postponed by the outbreak of war. A further 70 houses in the District, which are the subject of Demolition Orders or are contained in confirmed Clearance Areas were still in occupation at the year's end for lack of alternative accommodation for the occupants.

The number of applicants for Council Houses in the Dunmow Rural District at the end of the year was 630. Although in this total there were some duplications in that applicants had sought houses in more than one locality, there was still a formidable waiting list. Some 150 families in the list of applicants were sharing accommodation with others, while the bulk of the remainder were living in houses which were either too small for their growing families or, were generally in an unsatisfactory condition.

A further indication of the leeway to be made up in meeting the present housing demands of the District may be seen in the numbers of marriages contracted in the last two years. In 1946, there were 121, and in 1947, 140 marriages registered in the Dunmow Rural District. Those couples who moved out of the District after marriage would be nearly equalled in number by others moving in.

Apart from new building, which latterly has been confined to the erection of Council Houses and houses for agricultural workers, very little housing accommodation becomes available in the District each year. For example, in 1947, out of 700 occupied Council Houses, only 6 of these became vacant during the year. At the same time, the Council were faced with the prospect of having to provide housing accommodation for families evicted by Court Order from their homes.

The difficulties caused by a general lack of building facilities, which are most marked in a Rural District such as Dunmow, have militated against any measurable improvement in the general level of the sub-standard houses, which represent between a quarter and one-third of the total houses in the District. Generally, it has only been possible to have executed essential repairs to the existing fabric in order to maintain a minimum standard of fitness.

With regard to the overcrowding of housing accommodation the standards of the Housing Act, 1936, if applied, would not give a true picture of the present position. There are many cases of very real overcrowding which can be so considered from every aspect except the legal one. A typical example recently rehoused by the Council was that of husband, wife, child of 5 years and twins of under 1 year occupying a two-roomed house. Another case, since relieved by the Council, was that of twelve persons, comprising two families, occupying a four-bedroomed house. Even in conditions such as these, the living rooms are practically never used for sleeping purposes. Apart from that, the difficulties by way of mental stress inherent in the sharing by two families, often relatives, of one house and in particular, the cooking and washing facilities designed for one family, are too obvious to need further stressing.

The Council are well aware of the present lack of housing accommodation and have schemes in prospect for the erection of a total of 650 houses as their post-war programme. Sites and lay-out plans for the greater proportion of this programme have now been approved.

Inspection and Supervision of Food

Milk Supply

Pending the coming into operation of the Food and Drugs (Milk and Dairies) Act, 1944, which, *inter alia*, will transfer the registration of dairy farms and dairy farmers to the Minister of Agriculture and Fisheries, all milk-producing premises in the Rural District are registered with the Council, and licences in respect of producers of designated milks are issued by Essex County Council under the Milk (Special Designations) Regulations. Close liaison is maintained between the County Council and the Local Council in their respective spheres and in every case, before a licence to produce designated milk is issued by the County Council, all such premises are brought up to the standard of fitness required by the Milk and Dairies Orders.

At the end of the year 1947, there were 96 milk producers registered in the Dunmow Rural District. Of that total 66 are wholesale producers, 20 are retail producers and 10 are wholesale and retail producers.

The 96 milk producers include 39 farms producing Tuberculin-Tested milk, 19 accredited milk, and the remaining 38 undesignated milk.

In addition, there are five premises registered by the Rural District Council as retail dairies, of which three are licensed to sell Tuberculin-Tested milk in bottles.

A regular inspection of the premises concerned with the production and sale of milk has been maintained. Milk sampling in the District is undertaken by Essex County Council in the case of designated producers, by the Inspectors of the Ministry of Agriculture and Fisheries under the National Milk Testing and Advisory Scheme in regard to the keeping quality of milk and by the Council's Officers for biological examination, and in cases referred by the other authorities and on complaint by consumers.

The results obtained from the sampling done by the local authority were as under:—

RESULTS			
	Samples	Satisfactory	Unsatisfactory
Methylene Blue Test ...	6	5	1
Biological examination ...	52	51	1
Pathogenic organisms ...	1	1	—

Meat

Under the Ministry of Food scheme for centralised slaughtering, the bulk of the meat consumed in the District comes from Ministry Slaughterhouses outside the District. There is only one slaughterhouse (Dunmow Bacon Factory) in continuous operation at the present time, and there the duties of meat inspection are undertaken by a Veterinary Inspector employed by the Council. Relief duties are undertaken by the Council's Meat and Food Inspectors.

In addition, there was a considerable amount of meat inspection done by the Council's Inspectors in the case of the slaughtering of pigs by private licence. There were 303 pigs' carcasses inspected during the year under this scheme.

Inspection of meat exposed for sale in butchers' shops is undertaken by the Council's Inspectors. Only 76-lbs. of carcase meat were condemned in shops in 1947.

Ice Cream

The introduction of the Ice Cream (Heat Treatment) Regulations, 1947, in May, 1947, had the effect of inducing persons previously engaged in the manufacture of ice cream in the District to give up the same, and to become retailers of the pre-packed article manufactured elsewhere.

There were, at the end of the year, a total of seven Vendors of ice cream registered by the Council. Owing to difficulties in obtaining supplies, very little ice cream was sold in the District during 1947.

Inspection of the premises registered showed that conditions generally were satisfactory.

Bakehouses

There were nineteen bakehouses in operation at the end of the year. Conditions in these were generally satisfactory, only minor defects being discovered and these were remedied on request.

Other Foods

During the year, the following foodstuffs found upon inspection in shops, etc., to be unfit for human consumption were surrendered :—

Tinned Foods, 369 tins. Milk Products, 88-lbs. Fruit, $4\frac{3}{4}$ -lbs.

Prevalence of and Control over Infectious Disease

A table showing the incidence and age distribution of cases of infectious disease, other than cases of Tuberculosis, occurring in the Dunmow Rural District, during the year 1947, is given on page 31. Features of certain of the infectious diseases, notifiable and otherwise, are commented upon below.

POLIOMYELITIS AND POLIOENCEPHALITIS.

From September to the end of the year, there occurred ten confirmed cases which is a rate somewhat in excess of the general rate for England and Wales for the period of the 1947 epidemic.

The ages of the cases ranged from 4 years to 40 years, there being five under 10 years. one of 17 years and the remainder over 30 years of age. Only two were females. There were two deaths, both males. One was a boy, first seen in a comatose condition, who died shortly after admission to hospital, and the other was a man, in whom the disease was complicated by a cardiac condition. Of the other cases, three had made a complete recovery by the end of the year, and five were still receiving treatment in hospital under the arrangements made by the Essex County Council for orthopædic treatment and after-care of patients who had passed the infective stage of their illness.

Apart from two cases from the same village, all the others were from widely-scattered places in the Rural District. The social status of the family had apparently no bearing on the incidence of the disease. In only one incidence was there a possibility of direct case-to-case contact, and that only momentary (a girl delivering bread to a household wherein was a boy suffering from a mild attack, who had not then been seen by a doctor). Each of the ten cases was the only one in the particular family concerned. The enquiries into all of the cases showed that, without exception, either the case or immediate family contacts had been visiting places outside the District within the three weeks preceding onset. Such visits ranged from casual visits to local seaside resorts to regular business visits to the larger centres nearby, but, as far as could be ascertained, such visits had not led to any contacts with known cases of the disease.

The investigations made into this disease in this District will be included in a report to be published on the results of a Poliomyelitis Survey conducted in several Counties during the epidemic.

DIPHTHERIA.

The four cases of Diphtheria were all of children from two families in a temporary gipsy encampment. None of these children had been immunised, but other children from the same families and others in the encampment had been immunised and did not contract the disease.

In regard to the provision of facilities for the immunisation of children in the District particulars are given in the table below of the children who had been immunised under the scheme operating in the District by the Essex County Council as the Child Welfare Authority and the Rural District Council.

Number of Children who had completed a full course of Immunisation
at any time up to 31st December, 1947.

Age at 31/12/47 i.e., born in year	Under 1 1947	1 1946	2 1945	3 1944	4 1943	5 to 9 1938—1942	10 to 14 1933—1937	Total under 15
Number Immunised	—	62	78	194	196	1008	1032	2570
Estimated mid- year Population 1947	1410					2480		3890

It is reasonably certain that many children, particularly in the 0—4 age group, are annually immunised by private doctors in the District. It has not been possible to obtain particulars of such children, who, perforce, are omitted from the above figures.

A beginning was made during the year in providing secondary “boosting” doses for children newly entering school. By the end of the year 72 children had received these reinforcing injections

MEASLES.

Although there were a fair number of cases, these were widely-scattered throughout the District, and only at Felstead School was there any place with more than a few cases. Most of the cases were notified in the first quarter of the year.

WHOOPING COUGH.

There were very few cases in 1947. No scheme of immunisation against Whooping Cough is in existence in the District.

SCARLET FEVER.

Only in cases where complications arise or where conditions for nursing in the home are bad, are cases suffering from this disease removed to Hospital.

INFECTIVE HEPATITIS.

Sporadic cases of this disease continue to occur in the District. There was in 1947 a slight increase in the numbers notified in the District compared with previous years. No case-to-case contact could be established.

NON-NOTIFIABLE DISEASE.

German Measles was prevalent in the western part of the District in the spring. Otherwise there was nothing of any note.

TUBERCULOSIS.

Particulars of cases of Tuberculosis reported for the first time during the year (*i.e.*, new notifications and transfers from other Districts), and of deaths from the disease occurring in persons resident in the District are set out in the Table below.

Age Period (Years)	New Cases				Deaths			
	Respiratory		Non-respiratory		Respiratory		Non-respiratory	
	M.	F.	M.	F.	M.	F.	M.	F.
0—1	—	—	—	—	—	—	—	—
1—5	—	—	—	1	—	—	—	—
5—10	—	—	2	—	—	—	—	—
10—15	—	1	—	—	—	—	—	—
15—20	—	2	2	—	—	—	—	—
20—25	1	3	1	1	—	2	—	—
25—35	4	5	—	2	1	—	—	—
35—45	—	—	—	—	—	—	—	—
45—55	2	—	—	—	—	1	—	—
55—65	2	1	1	—	1	—	—	—
65 and upwards	—	1	—	—	1	1	—	—
	9	13	6	4	3	4	—	—
	22		10		7		—	

There were no deaths of un-notified cases.

At the end of the year, there were 110 cases on the Tuberculosis Register of the District. These were as follows :—

MALES.		FEMALES.	
Respiratory	Non-respiratory.	Respiratory.	Non-respiratory.
35	29	27	19

The Council take into consideration the circumstances of families in whom there are cases of Tuberculosis and, within their resources, endeavour to provide housing accommodation when existing housing conditions are prejudicial to the health of members of such families.

On the death or removal to hospital of an “open” case of Tuberculosis, the Council offer disinfection of premises and bedding. No charge is made for this service.

TABLE.

Notifiable Diseases (other than Tuberculosis) Notified in 1947

NOTIFIABLE DISEASE	NUMBER OF CASES NOTIFIED													Cases admitted to Hospital	Total Number of Deaths
	At all Ages	At ages—years													
		Under 1 year	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and over		
Scarlet Fever ...	7	—	1	1	1	1	1	1	1	—	—	—	—	—	—
Whooping Cough ...	18	1	1	2	3	7	1	1	1	—	—	—	—	—	—
Ac. Poliomyelitis ...	8	—	—	—	2	1	—	1	1	—	2	—	—	—	—
Ac. Polioencephalitis ...	2	—	—	—	—	2	—	—	1	—	—	—	—	—	—
Measles ...	68	—	3	8	5	25	10	14	1	—	—	—	—	—	—
Diphtheria ...	4	—	1	—	—	3	—	—	2	—	—	—	—	—	—
Puerperal Pyrexia ...	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ophthalmia Neonatorum ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery ...	1	—	—	—	—	1	—	—	—	—	—	—	1	—	—
Ac. Pneumonia ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever ...	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Infective Hepatitis ...	14	—	—	1	1	3	—	—	3	—	3	—	2	—	—
	127	3	6	12	6	43	13	16	8	5	—	3	16	3	—

